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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,823	06/08/2007	Chau Thien Vo	55428612-1US PTN/df	6744

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OGILVY RENAULT LLP
1, Place Ville Marie
SUITE 2500
MONTREAL, QC H3B 1R1
CANADA

EXAMINER

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,823	Applicant(s) VO, CHAU THIEN	
	Examiner MINH-CHAU PHAM	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Information Disclosure Statement

The 2 non patent literature documents “Quatro Air Technologies Inc.” and “Ametek Lamb Electric” from the IDS filed on January 4, 2010 are missing the dates and years. Appropriate correction is requested.

Specification

The abstract of the disclosure is objected to because legal phraseology “comprising” is used in the Abstract. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barris et al (5,616,171), in view of Lucey, Jr. et al (6,544,347 B2).

Barris et al disclose a method for removing particulates from a filter in a gas filtration system (see 100 in Fig. 6) comprising the steps of providing a casing (104) defining an inner cavity having an inlet (126) adapted to receive a flow of gas, such that gas enters the inner cavity, and an outlet (110) through which gas exits the inner cavity, a filter (102) associated with the outlet (110) such that gas exiting the inner cavity through the outlet (110) passes through the filter (102), positioning a back-pulse generator (122) positioned down stream of the filter (102), and actuating the generator (122) causing a reverse flow of gas so as to dislodge particulates retained in the filter (102) into the inner cavity (see Fig. 6, col. 5, line 30 through col. 6, line 15). Claim 13 differs from the disclosure of Barris et al in that the back-pulse generator is a ring vortex

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generator. Lucey, Jr. et al disclose a ring vortex generator (4) for use in a filter (col. 3, lines 6-17 and lines 27-39). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to adopt the ring vortex generator as taught by Lucey, Jr. et al in the filtering apparatus of Barris et al since it is well known in the art that the ring vortex mechanically abrades the filter surface, fractures the adhesion bonds of surface particulates, lifts the particulates from the filter surface, entrains particulates in the torus core, and transports particulates to the dust collector for disposal (col. 3, lines 9-13).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-17, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Knuth et al (5,997,619).

Knuth et al teach an apparatus (see 24 in Figs. 3 & 4) for filtering particulates and an undesired gas from a main gas comprising a particulate treatment station (34) enclosed in a first casing having a first inlet (46) adapted to receive a main gas carrying particulates and an undesired gas, a first filter(34) for retaining particulates in the particulate treatment station (col. 7, lines 52-67), a chemical treatment station (66) in a second casing physically separated from the first casing having a second inlet in fluid communication with the first outlet of the particulate treatment station (34) via a conduit

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such that the particulate treatment station (34) and the chemical treatment station (66) are separated from one another (see details of Figs. 3 & 4), and a pressure differential system to cause a flow of the main gas through the particulate treatment station and the chemical treatment station (col. 11, lines 1-5), a fan (52) mounted in the chemical treatment station (66), and the first casing and the second casing being on casters (see 58 in Figs. 3 & 4).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knuth et al (5,997,619), as applied supra.

Knuth et al disclose an apparatus (see 24 in Figs. 3 & 4) for filtering particulates and an undesired gas from a main gas comprising a particulate treatment station (34) enclosed in a first casing having a first inlet (46) adapted to receive a main gas carrying particulates and an undesired gas, a first filter(34) for retaining particulates in the particulate treatment station (col. 7, lines 52-67), a chemical treatment station (66) in a second casing physically separated from the first casing having a second inlet in fluid communication with the first outlet of the particulate treatment station (34) via a conduit such that the particulate treatment station (34) and the chemical treatment station (66) are separated from one another (see details of Figs. 3 & 4), and a pressure differential system to cause a flow of the main gas through the particulate treatment station and the chemical treatment station (col. 11, lines 1-5), a fan (52) mounted in the chemical

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treatment station (66), and the first casing and the second casing being on casters (see 58 in Figs. 3 & 4). Claims 18 and 19 call for the motor being mounted on the hinged plate or to a bracket. It would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the motor inside the casing on the hinged plate or to a bracket, as desired, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Allowable Subject Matter

Claims 1-12 allowed.

The following is a statement of reasons for the indication of allowable subject matter: None of the prior arts discloses a back-pulse generator having a diaphragm directly exposed to the filtered gas exiting the filter and the diaphragm being sized and oriented such that the actuation of the diaphragm moves the filtered gas and causes a reverse flow of the filtered gas so as to dislodge particulates retained in the filter.

Response to Amendment

Applicant's arguments filed on June 28, 2010 have been fully considered but they are not persuasive.

Regarding to claims 14-21, Applicant argues that the cited references "Smith and Ross do not disclose the particulate filter in separate casing from the chemical filter casing". The Examiner now drops both the Smith and Ross references and newly introduces Knuth et al (5,997,619) under 35 U.S.C. 102(b) rejection of claims 14-17, 20 and 21 to show:

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Knuth et al teach an apparatus (see 24 in Figs. 3 & 4) for filtering particulates and an undesired gas from a main gas comprising a particulate treatment station (34) enclosed in a first casing having a first inlet (46) adapted to receive a main gas carrying particulates and an undesired gas, a first filter(34) for retaining particulates in the particulate treatment station (col. 7, lines 52-67), a chemical treatment station (66) in a second casing physically separated from the first casing having a second inlet in fluid communication with the first outlet of the particulate treatment station (34) via a conduit such that the particulate treatment station (34) and the chemical treatment station (66) are separated from one another (see details of Figs. 3 & 4), and a pressure differential system to cause a flow of the main gas through the particulate treatment station and the chemical treatment station (col. 11, lines 1-5), a fan (52) mounted in the chemical treatment station (66), and the first casing and the second casing being on casters (see 58 in Figs. 3 & 4), as claimed.

Regarding to argument of claim 13, the Examiner now drops the Ray reference and newly introduces Barris et al (5,616,171) as the primary reference under the 103(a) rejection to show:

Barris et al disclose a method for removing particulates from a filter in a gas filtration system (see 100 in Fig. 6) comprising the steps of providing a casing (104) defining an inner cavity having an inlet (126) adapted to receive a flow of gas, such that gas enters the inner cavity, and an outlet (110) through which gas exits the inner cavity, a filter (102) associated with the outlet (110) such that gas exiting the inner cavity through the outlet (110) passes through the filter (102), positioning a back-pulse

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generator (122) positioned down stream of the filter (102), and actuating the generator (122) causing a reverse flow of gas so as to dislodge particulates retained in the filter (102) into the inner cavity (see Fig. 6, col. 5, line 30 through col. 6, line 15), as claimed. Claim 13 differs from the disclosure of Barris et al in that the back-pulse generator is specifically a ring vortex generator.

The Examiner newly introduces Lucey, Jr. et al (6,544,347 B2) as the secondary reference in combination with the primary reference Barris et al under the 103(a) rejection of the claim to show:

.Lucey, Jr. et al disclose a ring vortex generator (4) for use in a filter (col. 3, lines 6-17 and lines 27-39), as claimed. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to adopt the ring vortex generator as taught by Lucey, Jr. et al in the filtering apparatus of Barris et al since it is well known in the art that the ring vortex mechanically abrades the filter surface, fractures the adhesion bonds of surface particulates, lifts the particulates from the filter surface, entrains particulates in the torus core, and transports particulates to the dust collector for disposal (col. 3, lines 9-13).

Claims 1-12 allowed.

The following is a statement of reasons for the indication of allowable subject matter: None of the prior arts discloses a back-pulse generator having a diaphragm directly exposed to the filtered gas exiting the filter and the diaphragm being sized and oriented such that the actuation of the diaphragm moves the filtered gas and causes a reverse flow of the filtered gas so as to dislodge particulates retained in the filter.

Applicant's arguments with respect to claims 13-21 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-CHAU PHAM whose telephone number is (571)272-1163. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272 - 1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Duane Smith/
Supervisory Patent Examiner, Art
Unit 1797

/MINH-CHAU PHAM/
Examiner, Art Unit 1797
July 8, 2010